

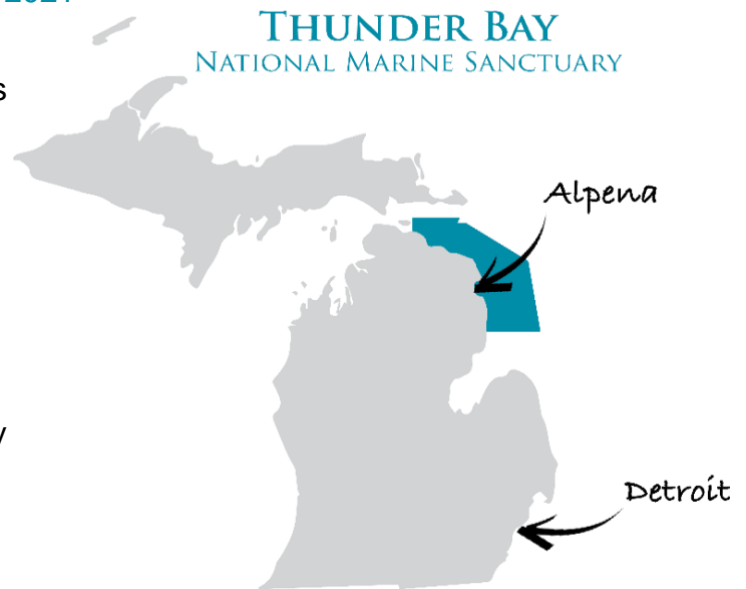
Thunder Bay National Marine Sanctuary Accomplishments

Fiscal Year 2021

Located in northwestern Lake Huron, Thunder Bay is adjacent to one of the most treacherous stretches of water within the Great Lakes system.

Unpredictable weather, murky fog banks, sudden gales, and rocky shoals earned the area the name "Shipwreck Alley." Today, the 4,300-square-mile Thunder Bay National Marine Sanctuary protects one of America's best-preserved and nationally significant collections of shipwrecks. Fire, ice, collisions, and storms have claimed over 200 vessels in and around Thunder Bay. To date, nearly 100 shipwrecks have been discovered within the sanctuary.

Visit thunderbay.noaa.gov for more information.



Multi-Partner Mapping and Exploration Efforts Throughout the Great Lakes Region

Throughout 2021, staff from Thunder Bay National Marine Sanctuary supported 11 weeks of sonar mapping operations in the sanctuary and Great Lakes region. The sanctuary managed the setup, mobilization, and operation of sonar mapping equipment onboard three NOAA small boats. Likewise, the sanctuary completed all mapping efforts in support of a NOAA Office of Ocean Exploration and Research Grant exploring the Alpena-Amberley Ridge in central Lake Huron.

International Film Festival Goes Virtual

Over a span of 10 days in January 2021, the sanctuary hosted the ninth annual Thunder Bay International Film Festival. With more than 400 ticket holders in attendance from 32 states and nine countries, the sanctuary screened over 100 films and had eight interactive livestream events, inspiring ocean enthusiasts in the Great Lakes region and beyond. This year the festival included over 30 films from the Office of National Marine Sanctuaries Earth Is Blue and Stories from the Blue series, which encouraged engagement with all sanctuary sites.



The NOAA R/V *Storm* prepares to depart the dock in Lake Huron. Photo: NOAA



The 9th annual Thunder Bay International Film Festival used a virtual entry portal. Photo: NOAA

Autonomous Surface Vessel Maps Sanctuary Bottomlands in Great Lakes

Working with ocean exploration partners, the sanctuary mapped 28.5 square miles in Lake Huron to search for historic shipwrecks and identify biological and geological features. Survey data will be used for managing ecosystems and navigational charts. Led by Ocean Exploration Trust, a team from the University of New Hampshire deployed the autonomous surface vessel *BEN*. NOAA's Office of Coast Survey and the Office of Marine and Aviation Operations participated to gain experience with procedures and technology that benefit NOAA's existing and emerging non-crewed system operational capabilities.



Researchers manage controls for an autonomous surface vessel from a mobile operations lab. Photo: NOAA

Looking Ahead

- With support from the Friends of Thunder Bay National Marine Sanctuary, the sanctuary is expanding the Great Lakes Maritime Heritage Center's roof deck. The roof deck features will reduce stormwater runoff, conserve energy, and improve air quality.
- Working with the City of Alpena and community partners, the sanctuary is developing a plan for the Thunder Bay riverfront surrounding the Great Lakes Maritime Heritage Center. The project will transform a former paper mill into a community education and recreation space.
- The sanctuary and the U.S. Coast Guard are working to expand the successful mooring buoy program to deeper, vulnerable archaeological sites in sanctuary waters. Providing a safe and regularly maintained means of accessing these deep-water sites is the most effective means of cultural resource protection.



The National Marine Sanctuary System is a network of underwater parks encompassing more than 600,000 square miles of marine and Great Lakes waters. The network includes a system of 15 national marine sanctuaries and Papahānaumokuākea and Rose Atoll marine national monuments.